



SEQUENCE LISTING

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Mitra, Partha
Xie, Ronglin

<120> MODULATION OF CELLULAR PROLIFERATION

<130> 07917-164001

<140> US 10/694,711

<141> 2003-10-27

<150> US 60/421,166

<151> 2002-10-25

<160> 32

<170> PatentIn version 3.2

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<223> synthetic polynucleotide - Site II minimal binding sequence

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Glu Glu Glu Glu Glu Glu Glu Glu Asp Asp Pro Leu Glu Glu Glu Phe
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Ser Cys Leu Trp Gln Glu Cys Gly Phe Cys Ser Leu Asp Ser Ser Ala
 65 70 75 80

Asp Leu Ile Arg His Val Tyr Phe His Cys Tyr His Thr Lys Leu Lys
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Gln Trp Gly Leu Gln Ala Leu Gln Ser Gln Ala Asp Leu Gly Pro Cys
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Ile Leu Asp Phe Gln Ser Arg Asn Val Ile Pro Asp Ile Pro Asp His
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Phe Leu Cys Leu Trp Glu His Cys Glu Asn Ser Phe Asp Asn Pro Glu
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Trp Phe Tyr Arg His Val Glu Ala His Ser Leu Cys Cys Glu Tyr Glu
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Ala Val Gly Lys Asp Asn Pro Val Val Leu Cys Gly Trp Lys Gly Cys
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Thr Cys Thr Phe Lys Asp Arg Ser Lys Leu Arg Glu His Leu Arg Ser
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His Thr Gln Glu Lys Val Val Ala Cys Pro Thr Cys Gly Gly Met Phe
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Ala Asn Asn Thr Lys Phe Leu Asp His Ile Arg Arg Gln Thr Ser Leu
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Asp Gln Gln His Phe Gln Cys Ser His Cys Ser Lys Arg Phe Ala Thr
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Glu Arg Leu Leu Arg Asp His Met Arg Asn His Val Asn His Tyr Lys
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Cys Pro Leu Cys Asp Met Thr Cys Pro Leu Pro Ser Ser Leu Arg Asn
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His Met Arg Phe Arg His Ser Glu Asp Arg Pro Phe Lys Cys Asp Cys
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Cys Asp Tyr Ser Cys Lys Asn Leu Ile Asp Leu Gln Lys His Leu Asp
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Thr His Ser Glu Glu Pro Ala Tyr Arg Cys Asp Phe Glu Asn Cys Thr
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Phe Ser Ala Arg Ser Leu Cys Ser Ile Lys Ser His Tyr Arg Lys Val
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His Glu Gly Asp Ser Glu Pro Arg Tyr Lys Cys His Val Cys Asp Lys
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Cys Phe Thr Arg Gly Asn Asn Leu Thr Val His Leu Arg Lys Lys His
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Gln Phe Lys Trp Pro Ser Gly His Pro Arg Phe Arg Tyr Lys Glu His
 370 375 380

Glu Asp Gly Tyr Met Arg Leu Gln Leu Val Arg Tyr Glu Ser Val Glu
 385 390 395 400

Leu Thr Gln Gln Leu Leu Arg Gln Pro Gln Glu Gly Ser Gly Leu Gly
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Thr Ser Leu Asn Glu Ser Ser Leu Gln Gly Ile Ile Leu Glu Thr Val
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Pro Gly Glu Pro Gly Arg Lys Glu Glu Glu Glu Glu Gly Lys Gly Ser
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Glu Gly Thr Ala Leu Ser Ala Ser Gln Asp Asn Pro Ser Ser Val Ile
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His Val Val Asn Gln Thr Asn Ala Gln Gly Gln Gln Glu Ile Val Tyr
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Tyr Val Leu Ser Glu Ala Pro Gly Glu Pro Pro Pro Val Pro Glu Pro
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Pro Ser Gly Gly Ile Met Glu Lys Leu Gln Gly Ile Ala Glu Glu Pro
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Glu Ile Gln Met Val
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| gtagaaattc | atcttgga | tctgtgtct | tctactaaac | aaccatctaa | tgattcagca | 1920 |
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Asp Leu Lys Glu Tyr Ala Glu His Cys Thr Asp Glu Gly Phe Ile Pro
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Ala Cys Leu Leu Ser Leu Phe Gly Lys Asn Leu Thr Thr Ile Leu Asn
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Glu Tyr Val Ala Met Lys Thr Lys Glu Thr Ser Asn Asn Val Pro Ala
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| Thr | Arg | Thr | Gly | Ile | Ala | Glu | Ile | Lys | Arg | Gln | Arg | Lys | Leu | Ala | Ser | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | |
| Gln | Thr | Ala | Pro | Ala | Ser | Ala | Glu | Leu | Leu | Thr | Leu | Pro | Tyr | Leu | Ser | | |
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| Gly | Gln | Phe | Thr | Thr | Pro | Pro | Ser | Thr | Gly | Thr | Gln | Val | Thr | Arg | Pro | | |
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| Ser | Gly | Gln | Ile | Ser | Asp | Pro | Ser | Arg | Ser | Tyr | Phe | Val | Val | Val | Asn | | |
| | | | 165 | | | | | | 170 | | | | | | 175 | | |
| His | Ser | Gln | Ser | Gln | Asp | Thr | Val | Thr | Thr | Gly | Glu | Ala | Leu | Asn | Val | | |
| | | 180 | | | | | | 185 | | | | | 190 | | | | |
| Ile | Pro | Gly | Ala | Gln | Glu | Lys | Lys | Ala | His | Ala | Ser | Leu | Met | Ser | Pro | | |
| | | 195 | | | | | 200 | | | | | 205 | | | | | |
| Gly | Arg | Arg | Lys | Ser | Glu | Ser | Gln | Arg | Lys | Ser | Thr | Thr | Leu | Ser | Gly | | |
| | 210 | | | | | 215 | | | | | 220 | | | | | | |
| Pro | His | Ser | Thr | Ile | Arg | Asn | Phe | Gln | Asp | Pro | Asn | Ala | Phe | Ala | Val | | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | | |
| Glu | Lys | Gln | Met | Val | Ile | Glu | Asn | Ala | Arg | Glu | Lys | Ile | Leu | Ser | Asn | | |
| | | | 245 | | | | | 250 | | | | | | 255 | | | |
| Lys | Ser | Leu | Gln | Glu | Lys | Leu | Ala | Glu | Asn | Ile | Asn | Lys | Phe | Leu | Thr | | |
| | | 260 | | | | | | 265 | | | | | 270 | | | | |
| Ser | Asp | Asn | Asn | Ile | Ala | Gln | Val | Pro | Lys | Gln | Thr | Asp | Asn | Asn | Pro | | |
| | | 275 | | | | | 280 | | | | | 285 | | | | | |
| Thr | Glu | Pro | Glu | Thr | Ser | Ile | Asp | Glu | Phe | Leu | Gly | Leu | Pro | Ser | Glu | | |
| | 290 | | | | | 295 | | | | | 300 | | | | | | |
| Ile | His | Met | Ser | Glu | Glu | Ala | Ile | Gln | Asp | Ile | Leu | Glu | Gln | Thr | Glu | | |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 | | |

Ser Asp Pro Ala Phe Gln Ala Leu Phe Asp Leu Phe Asp Tyr Gly Lys
 325 330 335

Thr Lys Asn Asn Lys Asn Ile Ser Gln Ser Ile Ser Ser Gln Pro Met
 340 345 350

Glu Ser Asn Pro Ser Ile Val Leu Ala Asp Glu Thr Asn Leu Ala Val
 355 360 365

Lys Gly Ser Phe Glu Thr Glu Glu Ser Asp Gly Gln Ser Gly Gln Pro
 370 375 380

Ala Phe Cys Thr Ser Tyr Gln Asn Asp Asp Pro Leu Asn Ala Leu Lys
 385 390 395 400

Asn Ser Asn Asn His Asp Val Leu Arg Gln Glu Asp Gln Glu Asn Phe
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Ser Gln Ile Ser Thr Ser Ile Gln Lys Lys Ala Phe Lys Thr Ala Val
 420 425 430

Pro Thr Glu Gln Lys Cys Asp Ile Asp Ile Thr Phe Glu Ser Val Pro
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Pro His Cys Ala Glu Leu Tyr Thr Asn Gln Met Ser Thr Glu Thr Glu
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Val Ser Leu Gly Cys Glu Ala Asn Asn Glu Asn Leu Ile Leu Ser Gly
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Lys Ser Ser Gln Leu Leu Ser Gln Asp Thr Ser Leu Thr Gly Lys Pro
 530 535 540

Ser Lys Lys Ser Gln Phe Cys Glu Asn Ser Asn Asp Thr Val Lys Leu
 545 550 555 560

Lys Ile Asn Phe His Gly Ser Lys Ser Ser Asp Ser Ser Glu Val His
 565 570 575

Lys Ser Lys Ile Glu Ile Asn Val Leu Glu Pro Val Met Ser Gln Leu
 580 585 590

Ser Asn Cys Gln Asp Asn Ser Cys Leu Gln Ser Glu Ile Leu Pro Val
 595 600 605

Ser Val Glu Ser Ser His Leu Asn Val Ser Gly Gln Val Glu Ile His
 610 615 620

Leu Gly Asp Ser Leu Ser Ser Thr Lys Gln Pro Ser Asn Asp Ser Ala
 625 630 635 640

Ser Val Glu Leu Asn His Thr Glu Asn Glu Ala Gln Ala Ser Lys Ser
 645 650 655

Glu Asn Ser Gln Glu Pro Ser Ser Ser Val Lys Glu Glu Asn Thr Ile
 660 665 670

Phe Leu Ser Leu Gly Gly Asn Ala Asn Cys Glu Lys Val Ala Leu Thr
 675 680 685

Pro Pro Glu Gly Thr Pro Val Glu Asn Ser His Ser Leu Pro Pro Glu
 690 695 700

Ser Val Cys Ser Ser Val Gly Asp Ser His Pro Glu Ser Gln Asn Thr
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Asp Asp Lys Pro Ser Ser Asn Asn Ser Ala Glu Ile Asp Ala Ser Asn
 725 730 735

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Asp Thr Glu Leu Thr Ser Ala Val Ser Ser Ile Asn Gly Glu Asn Leu
 755 760 765

Pro Thr Ile Ile Leu Ser Ser Pro Thr Lys Ser Pro Thr Lys Asn Ala
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Glu Leu Val Lys Cys Leu Ser Ser Glu Glu Thr Val Gly Ala Val Val
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Ser Val Ser Gln Ser Asn Val Val Val Leu Pro Gly Asn Ser Ala Pro
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Gly Ser Ala Ile Ile Ile Ala Ser Pro Val Gln Pro Val Leu Gln Gly
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Met Val Gly Met Ile Pro Val Ser Val Val Gly Gln Asn Gly Asn Asn
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Val Cys Asn Arg Ser Ile Pro Gln Phe Pro Val Pro Pro Lys Ser Gln
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Lys Ala Gln Gly Leu Arg Asn Lys Pro Cys Ile Gly Lys Gln Val Asn

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| Lys | Ser | Glu | Glu | Thr | Thr | Val | Pro | Phe | Pro | Glu | Glu | Ser | Ile | Val | | | |
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| Pro | Ala | Ala | Lys | Pro | Cys | His | Arg | Arg | Val | Leu | Cys | Phe | Asp | Ser | | | |
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| Thr | Thr | Ala | Pro | Val | Ala | Asn | Thr | Gln | Gly | Pro | Asn | His | Lys | Met | | | |
| 1070 | | | | | | 1075 | | | | | 1080 | | | | | | |
| Val | Ser | Gln | Asn | Lys | Glu | Arg | Asn | Ala | Val | Ser | Phe | Pro | Asn | Leu | | | |
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| Asp | Ser | Pro | Asn | Val | Ser | Ser | Thr | Leu | Lys | Pro | Pro | Ser | Asn | Asn | | | |
| 1100 | | | | | | 1105 | | | | | 1110 | | | | | | |
| Ala | Ile | Lys | Arg | Glu | Lys | Glu | Lys | Pro | Pro | Leu | Pro | Lys | Ile | Leu | | | |
| 1115 | | | | | | 1120 | | | | | 1125 | | | | | | |
| Ser | Lys | Ser | Glu | Ser | Ala | Ile | Ser | Arg | His | Thr | Thr | Ile | Arg | Glu | | | |
| 1130 | | | | | | 1135 | | | | | 1140 | | | | | | |
| Thr | Gln | Ser | Glu | Lys | Lys | Val | Ser | Pro | Thr | Glu | Ile | Val | Leu | Glu | | | |
| 1145 | | | | | | 1150 | | | | | 1155 | | | | | | |
| Ser | Phe | His | Lys | Ala | Thr | Ala | Asn | Lys | Glu | Asn | Gly | Asp | Ile | Leu | | | |
| 1160 | | | | | | 1165 | | | | | 1170 | | | | | | |
| Ser | Ser | | | | | | | | | | | | | | | | |
| 1175 | | | | | | | | | | | | | | | | | |

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 <212> DNA
 <213> Artificial
 <220>

<223> Site II sequence - homo sapiens

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45

<210> 10

<211> 19

<212> DNA

<213> artificial

<220>

<223> HiNF-P Antisense

<400> 10

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19

<210> 11

<211> 17

<212> PRT

<213> artificial

<220>

<223> PEPTIDE 1 - A FRAGMENT OF HINF-P FROM MICROSEQUENCING

<400> 11

Arg Tyr Glu Ser Val Glu Leu Thr Gln Gln Leu Leu Arg Gln Pro Gln
1 5 10 15

Glu

<210> 12

<211> 16

<212> PRT

<213> Artificial

<220>

<223> Peptide 2. a fragment of HiNF-P from the predicted C-terminus
of the protein

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Cys Glu Lys Leu Gln Gly Ile Ala Glu Glu Pro Glu Ile Gln Met Val
1 5 10 15

<210> 13

<211> 9

<212> DNA

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<220>

<223> HiNF-P-specific oligonucleotide primer - top strand

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caagagtatc ggaccagatt gaaaaccgaa agcg 34

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<220>
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<223> Reverse primer to amplify HiNF-P cDNA

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<220>
<223> HiNF-P, antisense oligo.

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 <210> 21
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<210> 23
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 <220>
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 <220>
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<210> 28

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20

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<212> DNA

<213> Artificial

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<223> Sequence of diagnostic XhoI site for genotyping and SacII, EcoRV
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45

<210> 31

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<212> DNA

<213> Artificial

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<223> Sequence of diagnostic XhoI site for genotyping and SacII for
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47

<210> 32

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<212> PRT

<213> Artificial

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<223> minimal phosphorylation consensus sequence

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Tyr Glu Ser Val Glu Leu Thr Glu

1

5